item (2) is done only at either right or left with respect to the display screen **132**. On the other hand, on the opposite side, the liquid-crystal display device **135** is designed to be movable with respect to the hinge metal fitting **139** and cover housing **137**. That is, the spacer **140** provided on the liquid-crystal display device **135** is guided into the hole (or a long hole) made in the hinge metal fitting **139** and cover housing **137**, which enables as much displacement as the variation of tolerance between the hole and the spacer **140**.

In the above-described fastening methods, however, the methods in item (1) and item (2) require the pedestal **143** for the head of the screw **141** at the side face of the cover housing **137** as shown in FIGS. **11**A, **11**B, **12**A, and **13**B. In the fastening method of allowing the liquid-crystal display device **135** to move as in item (3), since the hole for guiding the spacer **140** is needed where there is no hinge metal fitting **139**, the same structure as the pedestal **143** has to be provided. When a pedestal is provided on the right and left side faces of the inside of the cover housing **137**, the rib **142** (shown in FIGS. **11**B, **12**B, and **14**B) connected to the pedestal from inside the cover housing **137** is required to secure the strength of the pedestal.

FIG. **15**A shows a state of a product before collision. When the product drops in the right-to-left direction with respect to the display screen and the side face of the display section receives impact, the rib **142** fixed with the screw **141** is deformed due to the impact as shown in FIG. **15**B showing a state of the product after the collision. Generally, the longer the distance the product moves from when it receives the impact load until its speed decreases to zero, that is, the longer the braking distance, the lower the produced acceleration. However, since the rib **142** stands in the direction in which the product drops, it serves to restrict the displacement of the liquid-crystal display device **135**. This gives a high acceleration to the liquid-crystal display device **135**, with the result that the liquid-crystal display device **135** can be broken.

BRIEF SUMMARY OF THE INVENTION

An object of the present invention is to provide not only a mounting structure of a liquid-crystal display device which prevents the housing of the display section fixing the hinges from being broken even when the display section is opened and closed repeatedly and improves the drop strength, but also a portable information apparatus using the mounting structure.

To solve the above problems and achieve the object, a portable information apparatus comprising: a first housing; and a second housing which is mounted to the first housing in such a manner that it can be rocked freely, with its main face facing the first housing, and which includes a panel-like display device with a display screen exposed at the main face and a hinge member to mount the display device in the second housing, wherein the hinge member includes a fixed member fixed to the second housing and an extended member mounted to the fixed member and intervening between the display device and the inner wall of the second housing, and the extended member includes a pressing section which presses against the side face of the display device and a flexible curved section which is provided so as to be continuous with the pressing section and which is formed convexly at the inner wall of the second housing.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING

FIG. **1**A is a perspective view of a portable information apparatus according to a first embodiment of the present invention;

FIG. **1**B is a plan view of the main part of the portable information apparatus;

FIG. **1**C is an exploded perspective view of the main part of the portable information apparatus;

FIG. **2** is a perspective view of a liquid-crystal display device mounted in a cover housing;

FIG. **3**A is a graph for a history of acceleration in a conventional structure by drop impact analysis and FIG. **3**B is a graph for a history of acceleration in a structure according to the present invention;

FIG. **4** schematically shows a hinge member according to a second embodiment of the present invention;

FIG. **5** schematically shows a hinge member according to a third embodiment of the present invention;

FIG. **6** schematically shows a hinge member according to a fourth embodiment of the present invention;

FIG. **7**A is a perspective view of the portable information apparatus, with the display section opened, and FIG. **7**B is a perspective view of the portable information apparatus, with the display section closed;

FIG. **8** shows the configuration of a hinge part;

FIG. **9** is an exploded view of a conventional display section;

FIG. **10** is a schematic explanatory diagram of a fixing structure using conventional hinge metal fittings;

FIGS. **11**A and **11**B are a side view and a plan view of a conventional fastening section, respectively;

FIGS. **12**A and **12**B are a side view and a plan view of another conventional fastening section, respectively;

FIGS. **13**A and **13**B are a side view and a plan view of still another conventional fastening section, respectively;

FIGS. **14**A and **14**B are a side view and a plan view of still another conventional fastening section, respectively; and

FIG. **15**A is a schematic diagram of a state of a product before a collision and FIG. **15**B is a schematic diagram of a state of the product after the collision.

DETAILED DESCRIPTION OF THE INVENTION

FIG. **1**A shows a portable information apparatus **10**, such as a laptop or a notebook personal computer or a word processor. As shown in FIG. **1**A, the portable information apparatus **10** includes a first body **20** and a second body **30** joined with each other in such a manner that they can be opened and closed. The first body **20**, which has a box-like body housing **21**, includes not only a keyboard **22** and an input device, such as a pointing device, but also a CPU-carrying motherboard **24** and a hard disk **25**.

The second body **30** has a display section housing **31**. The display section housing **31** is composed of a box-like cover housing **32** with its top opened and a frame housing **33** to be mounted in the opening of the cover housing **32**. Inside the display section housing **31**, a liquid-crystal display device **34** for displaying information is housed. In the figure, numeral **34***a* indicates the display screen of the liquid-crystal display device, **34***b* indicates the left side face, and **34***c* indicates the right side face.

The body housing **21** and the display section housing **31** are joined with each other via hinge parts **26** shown in FIG. **1**C in such a manner that they can be opened and closed. When the portable information apparatus is not used or is being carried, closing the body housing **21** and the display section housing **31** so as to stack them one on top of the other enables the display screen **34***a* of the liquid-crystal display